IOWA STATE UNIVERSITY
University Extension

ADAIR COUNTY EXTENSION AG NEWS

Volume 4 Issue 3 September 2011

Your Ideas Needed:

It's time to make a list of ideas for 2012 Adair County Fair. Each year fair changes are based on the ideas that are submitted. A special worksheet Compliments & Considerations is available at our website

http://www.extension.iastate.edu/adair/kidsteens.htm

Due October 3.

Inside this issue:

ISU EXTENSION—ADAIR COUNTY
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Neely-Kinyon Field Day - September 21

Iowa State University Extension and Outreach will co-sponsor a field day and workshop to discuss the integration of crops and livestock in sustainable and organic systems.

The field day is **Wednesday**, **September 21, from 4 to 7 p.m.**at the ISU Neely-Kinyon Research and Demonstration Farm near Greenfield, with supper prepared by the Adair County Pork Producers and the Henry A. Wallace Country Life Center. The meal will feature locally-grown organic vegetables, pie and ice cream from Picket Fence Creamery.

Field day speaker ISU Organic Specialist Kathleen Delate has shown, in 13 years of research at the Neely-Kinyon farm, basically equivalent corn and soybean yields between organic and conventional production techniques, and excellent organic alfalfa performance.
Joe Sellers, ISU Extension beef specialist, will be on hand at the field day to discuss grazing management, selecting the right forage for your system and stockpiling grazing to reduce feed costs.

After supper Ajay Nair, ISU Dept. of Horticulture, will discuss organic amendments, such as compost, manure and a multitude of cover crops, to improve soil biology on the farm. Diane Weiland of the Wallace Centers of Iowa, will round out the evening with a local farmer perspective on growing and marketing vegetables to meet the increasing interest in local foods.

There will be displays and activities in the machine shed.

Attendance is free and supported by the USDA-Sustainable Agriculture Research and Education Program. For more information, e-mail Kathy Rohrig, krohrig@iastate.edu or call 641-743-8412.

Directions from Greenfield: 2 miles South on Highway 25, ½ mile East on 260th Street, ½ mile North on Norfolk Ave.

Healthiest State Initiative Kickoff

To become the Healthiest State, we need to start somewhere. That's why on October 7 all Iowans are asked to walk one kilometer at noon wherever they are. Go with your friends, family, co-workers or walk around the combine a couple times.

How long is 1K?

- 6/10 of a mile
- 7.5 blocks
- A 12 minute stroll @ normal speed

start somewhere walk

October 7, 2011 | Noon

Go to iowahealthieststate.com to take the pledge.

Harvest Tips for Lodged Corn

By Mark Hanna, Department of Agricultural and Biosystems

With larger than average areas dealing with lodged or downed cornstalks in Iowa due to recent storms, it's a good time to review steps to take when faced with harvesting significant areas of lodged corn.

Scout fields to determine where problem areas are and the condition of stalks and ears. Harvest the problem areas first when field conditions are better and before kernels in close proximity to the ground have an opportunity for potential further deterioration. An exception might be made to harvest an area with particularly weak stalk strength that is still standing if the odds of lodging from weather seem high.

The only way to evaluate whether any harvesting aid or technique is helping is to measure harvest losses. Each ¾-pound ear on the ground per 436 square feet equals a loss of one bushel per acre. Detailed instructions for measuring losses are in Profitable Corn Harvesting, PM 573. Take a measuring tape to the field at harvest and spend a few minutes behind the combine checking losses.

Tips for machine operation to reduce losses

- Set gathering chains for more aggressive operation with points opposite each other and relatively closer together. Adjust deck plates over snapping rolls only slightly wider than cornstalks so that they hold stalks but not so narrow that stalks wedge between the plates.
- Operate the head as low as practical without picking up rocks or significant amounts of soil.
- Single-direction harvesting against the grain of leaning stalks may help. Evaluate losses though before spending large amounts of time dead-heading through the field.
- Limited field measurements suggest a corn reel may or may not help limit machine losses; however, a reel likely allows greater travel speed and improves productivity. Losses may be similar comparing harvest at 1 mile per hour without a reel and 3 miles per hour with a reel, but harvest goes much faster. Spiral cones mounted atop row dividers or the addition of higher dividers on each end of the cornhead are other potential after-market harvest aids.
- If harvest speeds are significantly reduced, the amount of material going through the combine is reduced. Fan speed may need to be reduced to avoid blowing kernels out of the combine. Rotor speed may need to be reduced to maintain grain quality. Check kernel losses behind the combine and grain quality to fine tune cleaning and threshing adjustments.
- Grain platforms have been used to harvest corn in relatively severe cases. More cornstalks and material other than grain enters the combine. Expect capacity to be reduced somewhat. Concave clearance may need to be increased for increased throughput and fan speed may need to be increased to aid separation in the cleaning shoe.

It won't be harvest as usual

Perhaps as important as anything, get into the correct frame of mind and keep the right mental attitude. Recognize that speeds will be slower. Communicate these expectations with others. Don't allow an accident to compound harvest problems.

Contact info - hmhanna@iastate.edu or (515) 294-0468.

WEATHER INFORMATION:

Receive timely weather updates by following Elwynn Taylor on Twitter
http://twitter.com/ElwynnTaylor
Gowning Degrees Day website:
www.mesonet.agron.iastate.edu

PESTICIDE APPLICATOR TESTING

All **Pesticide Applicator Testing** (commercial & private) is now done at Southwestern Community College in Creston. Contact Marilyn Werner to set up an appointment 641-782-7081. Cost is $20 for testing.

Testing is no longer available at the Wallace Building in Des Moines or by Jim Christensen here at the Extension office.

Opportunities to maintain your private and/or commercial applicator license through continuing education will still be held in Adair County. Watch this newsletter for dates, times, and locations.

If you wish to be reminded of PPAT training opportunities within Adair County via a text message, please call the Extension office at 641-743-8412 and provide your cell number and service provider.

Reduce Risk of Mycotoxin Contamination by Scouting Fields for Ear Rot

Hail storms damaged several corn and soybean fields in parts of Iowa last week. In some areas, the corn and beans are completely lodged as a result of the storm. In other areas, leaves are significantly stripped, but the grain seems relatively undamaged.

During the 2009 growing season, approximately one million acres of crops from Sac to Grundy Counties were damaged by a single hail storm. Most of the corn crop was at growth stage R2. We conducted a survey to assess the impact of hail damage on grain quality (Robertson et al., 2010). We found that hail damage to kernels increased the risk of ear rot and mycotoxin contamination.

Scout for ear rot

The corn that was damaged in the hail storms last week was further along in development (growth stage R5) than the grain damaged in 2009, but it still may be at risk for ear rots and associated mycotoxin contamination. Fields that were damaged need to be scouted in the next 10 to 14 days for ear rot. If more than 10 percent of the ears in a field are moldy, the field should be scheduled for an early harvest. Check with your insurance company regarding their requirements for claims. Most companies will want to assess the field before it is harvested.

Fields that were not damaged by hail should also be scouted for ear rot, since the hot, dry weather with occasional rain that has occurred recently is favorable for Aspergillus and Fusarium ear rot development. Symptoms of Aspergillus ear rot are a powdery olive-green mold that develops on damaged kernels (Figure 1). High temperatures (80 to 100 F) and high relative humidity (85 percent) favor the growth of Aspergillus in the field. Note that the presence of Aspergillus ear rot does not necessarily indicate aflatoxin contamination.

Aflatoxins are produced under certain conditions, and are most often a problem when night temperatures remain above 70 F. The U.S. Food and Drug Administration regulates aflatoxin levels in food and livestock feed. An "action level" of 20 parts per billion (ppb) for aflatoxin in corn has been established for interstate commerce.

Fusarium ear rot symptoms are characterized by white to light pink mold that usually occurs on damaged kernels (Figure 2). High temperatures (above 77 F), drought stress before or after silking and mechanical damage favor infection and the development of Fusarium ear rot. Mycotoxins associated with this ear rot are fumonisins, and the optimum temperature for fumonisin production is 75 F (which is cooler than that for aflatoxin). Bush et al (2003) found fumonisin concentrations increased from physiological maturity, thus early harvest may help reduce the level of contamination. The U.S. Food and Drug Administration (FDA) has guidelines for safe levels of fumonisins in corn used for foods and animal feeds.

Fumonisins are acutely toxic to animals (especially pigs and horses), and have been linked to increased cancer rates and other human health problems.

Article by: Alison Robertson, Department of Plant Pathology and Microbiology

Charles Hurburgh, Iowa Grain Quality Initiative

Nutrition Program for Families with Young Children - October 13, 20, 27

Learning simple ways to get young children to eat nutritious foods and making family meals fun is the focus of a nutrition program being offered by Adair County Extension. The three-part series, *Loving Your Family, Feeding Their Future*, is designed especially for families with children under the age of five. Each session will feature a new recipe that parents will help prepare, great nutritional information, and simple ideas to get their child and family eating healthy and staying physically active.

The series will be held on Thursday mornings, October 13, 20, 27, at the 4-H/FFA Building on the Adair County Fairgrounds. The program will run from 10:30-12:00 noon.

There is no charge to attend, but advance registration is needed to ensure sufficient supplies and child care are available. Registrations are requested by Friday, October 7. For more information or to register, contact Adair County Extension at 641-743-8412 or 1-800-ISUE399 or e-mail powella@iastate.edu

Frost and Forage by Stephen Barnhart

The first frost of the autumn generally brings a flurry of forage-related questions. These questions usually center on three general topics.

Managing frosted sorghum-sudangrass and sudangrass

The potential for prussic acid poisoning and management suggestions are related both to the size of the plant when frosted and the extent of frost damage. The risk of damaging levels of prussic acid is very unlikely.

Prussic acid, more correctly called hydrocyannic acid is formed in sudangrass or sorghum-sudangrass hybrids which are severely stressed or frost damaged. The hydrocyannic acid develops within a few hours after the frost and usually dissipates within a few days. The safest management is to remove cattle and sheep from frosted fields for several days. Livestock can be returned to frost injured sudangrass that is 18" or taller and sorghum-sudangrass 30" or taller after about 3 or 4 days. If the grass was shorter than these heights when frost injured, withhold cattle and sheep for 10 days to 2 weeks following the frost to avoid problems. Then watch for new shoot regrowth, (tillers or "suckers") on partially frost killed plants! Direct grazing of these fresh new shoots can be toxic too. Where new shoots appear following frost, avoid grazing until 2 weeks after the "killing" frost that kills the new shoots.

Prussic acid poisoning is not a common occurrence. Very few verified cases are reported by veterinarians. Consider the recommendations above to be at the 'low risk' or 'conservative' level. If in doubt, move the livestock to another type of forage.

Livestock can be returned to the sudangrass or sorghum-sudangrass fields following a "killing" frost and appropriate post-frost delay period.

Frost damaged sudangrass or sorghum-sudangrass hybrids can be cut and stored as silage. Observe proper ensiling technique, particularly moisture content, when ensiling these crops.

Sudangrass or Sorghum-Sudangrass should never be used for horse pasture.

Is frosted alfalfa toxic?

Frost injured alfalfa, clovers, and the commonly used perennial cool-season forage grasses are NOT considered toxic and can be safely grazed or harvested for hay or silage following a frost. There is probably a slightly higher bloat risk for grazed alfalfa and white clover the first few days after a frost. Follow normal bloat-preventing grazing management when grazing alfalfa and clover.

Now that we've had frost, should I harvest the last alfalfa cutting?

There is not a simple answer. In general, it will depend whether the frost was a "killing frost" or not. A "killing frost" is not the first light frost of the season; rather, it is a 23 or 24 F degree freeze that lasts for 4 to 6 hours or so.

If the producer does not need the forage, it is best for the alfalfa plants to leave them uncut and standing through the winter.

If it was the hard, killing freeze, and the producer needs the forage, harvest as soon as possible after the freeze to salvage as much of the nutritive value as possible. The longer the delay, the greater will be the weathering damage and leaf loss from the standing frosted plants. To improve plant crown insulation over the winter, consider leaving a 5 to 6 inch stubble at this late-season harvest.

If the frost were a light, non-killing freeze, the tops of the alfalfa plants will be visibly damaged but will not likely stop the plants' growth for the season. The damaged tops will deteriorate in nutritive quality for the remainder of the autumn, but the plant will still be attempting to regrow from crown buds and will be using stored sugars. The best management for the plant is to allow it to continue to grow using whatever green leaf area it still has until the hard, killing freeze. Then if the producer needs the forage, it can be cut and harvested for hay or silage; or grazed.

Alfalfa plants cut immediately after a partial freeze (non-killing frost) and which experience further normal growing temperatures will start new regrowth from crown buds, using accumulated proteins and carbohydrates that would otherwise be used for over wintering and regrowth the following spring. When these late-recovering plants experience a killing freeze a few days or weeks later, they will be physiologically weaker and more susceptible to winter injury.

Encourage Someone to Join 4-H

The 4-H program provides an opportunity for 4th-12th graders to learn new skills in a wide variety of project areas from livestock production to photography. Plus 4-H'ers gain skills in communication, leadership, and citizenship. Sign up for the 2001-12 4-H year is now being accepted. There are special incentives to enroll or re-enroll by Friday, October 7th, although sign up is on-going.

Learn more about the 4-H program by attending a 4-H Open House on Sunday, October 2nd, 3:30—4:30 p.m. at the Extension office in Greenfield; or Wednesday, October 5, 4:00—5:00 p.m. at the Stuart Library in Stuart. Members, potential members, parents, and leaders are all invited.

Celebrate National 4-H Week
October 2nd—8th

Become a fan of Adair County 4-H and Youth on facbeook.

September 2011

E.O.* Extension Office

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 Adair County Corn & Soybean test plot field day 6 pm - 1/4 mile east of Orient.	2	3
4	5 LABOR DAY Extension Office Closed	6	7	8	8	10
11	12	13	14	15 Greenhorn Grazing—Corning 10 am	16	17
18	19	20	21 Neely-Kinyon Field Day 4-7 pm	22 AK-SAR-BEN September 22-25 Omaha, NE	23	24
25	26 Extension Council 7:30 pm E.O *	27	28	29	30	

October 2011

E.O.* Extension Office

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2 4-H Club Leader Training, 1:30-3:30 pm, *EO Youth Council 4-H Open House 3:30-4:30 pm, *EO	3 4-H Recordbooks & volunteer logs due to *EO SOFA Planning Team applications due	4	5 Aquatic, Forest, Roadside - Commercial PAT - 9-11:30 E.O. 4-H Open House 4-5:30 pm, Stuart	6 Healthy in a Hurry for child care providers 6:30—8:30 pm *EO $10 pre-register	7	8 CPR and First Aid for child care providers 8 am—12 noon, $55 Adair Memorial Hospital
9 SOFA Planning Committee 2 pm	10	11 Child Book Club 5:30 pm	12	13 Child Nutrition program 10:30-12 Fairgrounds	14	15
16	17	18	19	20 Child Nutrition program 10:30-12 Fairgrounds	21	22
23	24 Extension Council 7:30 pm *EO	25	26	27 Child Nutrition program 10:30-12 Fairgrounds	28	29
30	31					